

FLAT PANEL DISPLAY DEVICE HAVING PLANAR FIELD EMISSION SOURCE

CROSS REFERENCE TO RELATED APPLICATION

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This application is a continuation-in-part application of United States Patent Application Serial No. 09/533,202 filed on March 3, 2000, *now U.S. patent No. 6,380,671* which is incorporated by reference herein in its entirety.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a flat panel display (FPD), and more particularly, to a flat panel display having a planar field emission source formed of a low work function material.

2. Description of the Related Art

FIG. 1 shows a conventional flat cathode ray tube. As shown in the drawing, a faceplate 1 and a back plate 3 are sealed by a sealant 5. A phosphor layer 7 and a metal film 9 are formed on an inner surface of the faceplate 1. A rear electrode 11 is formed on an inner surface of the back plate 3, which faces the inner surface of the faceplate 1. In addition, a plurality of tungsten line cathodes 13 is used as an electron emission source. A grid plate 15 and a mesh electrode 17 are disposed between the faceplate 1 and the back plate 3.

The grid plate 15 has a plurality of apertures 15a that are formed corresponding to pixels for passing electrons. First and second grid electrodes 19 and 21 are